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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,470	10/22/2003	Don Kennard	NOBELB.063DV1	5956

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EXAMINER

SINGH, SUNIL K

ART UNIT	PAPER NUMBER
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3732

NOTIFICATION DATE	DELIVERY MODE
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03/03/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/691,470	Applicant(s) KENNARD, DON	
	Examiner Sunil K. Singh	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39-57 and 62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 39-57 and 62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to Applicant's amendments filed on 12/11/2009.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 39,40,43,44,48,56,57 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Nardi et al. (US 5,520,540).

Nardi discloses a dental implant that includes: an abutment (4) that is capable of being adapted with a dental prosthesis; a bendable neck segment (where 2a points at in Figure 2 and where 1 points at in Figure 5) connected to the abutment (Fig. 5); wherein the bendable neck section is capable of being bent such that the body segment is positioned within a patient's jawbone and the bendable neck segment can be bent to adjust the angle of the abutment; so that the a body segment (10) connected to the flexible neck segment (Fig.5); the body segment (10) having threads extending helically about the implant axis, the thread diameter tapering non-linearly from a maximum adjacent the neck segment to a minimum at a distal end (Fig. 5); a torque engagement segment (11) that is capable of being configured to engage a torque-imparting tool; wherein the torque segment comprises a plurality of flat surfaces on an outer surface of the torque segment (Fig. 5); wherein the threaded body segment (10) comprises an

Art Unit: 3732

upper flared section proximal to the neck portion (Fig. 5 that is reproduced below); an intermediate section and a tapered lower section distal from the neck segment (Fig. 5); the lower section having a smaller angle of taper as compared to the upper section (Fig. 5) (note that the claims do not call for a tapered upper portion); wherein the neck section is more narrow than both of the upper flared section of the body segment and the abutment (Fig. 5); wherein the neck segment has a plurality of flat facets on the outer surface (Fig. 2); wherein the threads of the intermediate section of a constant diameter (Fig. 5); wherein the length of the body segment is approximately equal to the thickness of the cortical layer of the bone. However, Nardi fails to disclose a monolithic implant. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Nardi to make monolithic, since it has been held that it involves no invention to cast in one piece an article which has formerly been cast in multiple pieces and put together and that such a modification involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

3. Claims 41,42,45-47,49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nardi in view of Bauer (US 5,074,790).

Nardi discloses the invention substantially as claimed except for a device that includes: thread diameter is within the range of 1-3mm; threads of the upper flared section that define a taper angle between about 6 and 14 degrees and between 3 and 7 degrees; wherein the neck segment has a length greater than 5 mm; wherein the body

Art Unit: 3732

segment is about 12 mm in length; wherein the total length along the implant axis is greater than 20 mm.

Nardi teaches an implant having thread diameters within the range of 1-3 mm (column 4, line 16). It would have been obvious to one having ordinary skill in the art to modify Nardi to include the thread diameter range as taught by, Bauer, since such a diameter range is well known in the art. It also would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Nardi to include a flared section with the various claimed ranges of angles, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Aller*, 105 USPQ 233. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Nardi to include a body/neck segment and a total implant length at the various claimed values; since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

4. Claims 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nardi in view of Christensen (US 3,466,748).

Nardi disclose a dental implant that shows the limitations as described above; however, Nardi does not show the thread depth tapering and wherein the maximum thread depth is between about 0.5 mm and 0.7 mm and wherein the pitch is 0.8mm to 1.8mm.

Christensen shows a dental implant having a thread depth tapering from a maximum thread depth adjacent the neck segment to a minimum thread depth adjacent the distal end (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the thread depth of Christensen in order to increase stability and decrease patient trauma in view of Christensen. It would have been an obvious matter of choice to one of ordinary skill in the art as to the specific depth and pitch of the body segment. Furthermore, to modify Nardi/Christensen to include a thread depth and pitch having the claimed ranges would have been obvious to one having ordinary skill in the art, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Aller*, 105 USPQ 233.

Response to Arguments

5. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.
6. Applicant's arguments filed 12/11/2009 have been fully considered but they are not persuasive. Applicant argues that Nardi's reference does not bend. However, the Applicant does not claim a bent neck portion but rather a neck portion that is bendable thus having the capability to bend. The Examiner interprets the term "bendable: the same as the term "flexible". Flexibility is a relative term, particularly since virtually anything will flex/bend if enough pressure is applied to it (see *Freeman v. Harris-Hub Co., Inc.*). Thus, it is the Examiner's position that Nardi does in fact meet the limitation of the term "bendable".

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunil K. Singh whose telephone number is (571) 272-3460. The examiner can normally be reached on Monday-Friday (Increased Flex Schedule).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris L. Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

02/25/2010

/Sunil K Singh/
Examiner, Art Unit 3732

/Cris L. Rodriguez/
Supervisory Patent Examiner, Art Unit 3732